What We Claim Is:

1. A computer-based method for determining a value of a customized indexed call option, comprising:

a) searching a data structure based on a search criterion to determine at least one intermediate value of said customized indexed call option; and

b) interpolating in said at least one intermediate value of said customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find said value.

2. A computer-based method for determining a value of a customized indexed call option as recited in claim 1 wherein said search criterion comprises a set of predetermined parameters of the customized indexed call option.

3. A computer-based method for determining a value of a customized indexed call option as recited in claim 1 wherein said data structure is initialized based on a second predetermined set of parameters.

4. An article of manufacture comprising a customized indexed call option with a specified term and specified notional amount n operatively arranged to allow an investor to choose notional amounts $n0$ and $n1$ at specified intervals within the term such that $n0>=0$, $n1>=0$, and $n0+n1 \leq n$, while guaranteeing nonnegative total credited interest over the term, where interest credited on the notional amount $n0$ is based upon an arbitrary but specified nonzero interest rate, and interest on the notional amount $n1$ is credited based on changes in a specified index.

5. An article of manufacture comprising a customized indexed call option with a specified term and specified notional amount n operatively arranged to allow an investor to choose notional amounts n_i at specified intervals within the term such that i is an integer such that $0 \leq i \leq$

k, $n_i \geq 0$, and $\Sigma n_i \leq n$, while guaranteeing nonnegative total credited interest over the term, where interest credited on the notional amount n_0 is based upon an arbitrary but specified nonzero interest rate, and interest on the notional amount n_i, i $\geq$ 1, is credited based on changes in specified index i, where k, the number of specified indices, is an integer greater than or equal to one.

6. A computer-based method for determining a value of a customized indexed annuity with guaranteed return amount G, comprising:

a) determining a value of a customized indexed call option; and

b) determining a present value of the guaranteed return amount G.

7. A computer-based method for determining a value of a customized indexed certificate of deposit with guaranteed return amount G, comprising:

a) determining a value of a customized indexed call option; and

b) determining a present value of the guaranteed return amount G.

8. A computer-based method for determining a value of a customized indexed life insurance policy with guaranteed return amount G, comprising:

a) determining a value of a customized indexed call option; and

b) determining a present value of the guaranteed return amount G.

9. A computer-based method for determining a value of a customized indexed bond with guaranteed return amount G, comprising:

a) determining a value of a customized indexed call option; and

b) determining a present value of the guaranteed return amount G.

10. A computer-based method for determining a value of a customized indexed call option, comprising:

a) generating a first sample of index paths based on a first set of predetermined parameters;

b) determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths; and

c) determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters.

11. A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are randomly generated from distributions specified by the first set of predetermined parameters.

12. A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are quasi-randomly generated from distributions specified by the first set of predetermined parameters.

13. A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said first sample of index paths and said second sample of index paths are identical.

14. A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said first sample of index paths and said second sample of index paths differ.

15. A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are generated for one index.

16. A computer-based method for determining a value of a customized indexed call option as recited in claim 10 wherein said samples of index paths are generated for multiple indices.

17. An apparatus for determining a value of a customized indexed call option, comprising:

a) means for searching a data structure based on a search criterion to determine at least one intermediate value of said customized indexed call option; and

b) means for interpolating in said at least one intermediate value of said customized indexed call option based on a set of predetermined parameters of the customized indexed call option to find said value.

18. The apparatus recited in Claim 17 wherein said means for searching a data structure comprises a general purpose computer specially programmed to search said data structure based on said search criterion to determine at least one intermediate value of said customized indexed call option.

19. The apparatus recited in Claim 17 wherein said means for interpolating in said at least one intermediate value of said customized indexed call option comprises a general purpose computer specially programmed to perform said interpolation.

20. An apparatus for determining a value of a customized indexed call option, comprising:

a) means for generating a first sample of index paths based on a first set of predetermined parameters;

b) means for determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths; and

c) means for determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters.

21. The apparatus recited in Claim 20 wherein said means for generating a first sample of index paths based on a first set of predetermined parameters comprises a general purpose computer specially programmed to generate said first sample of index paths.

22. The apparatus recited in Claim 20 wherein said means for determining an optimal choice boundary maximizing an intermediate value of said customized indexed call option for such first sample of index paths comprises a specially programmed general purpose computer.

23. The apparatus recited in Claim 20 wherein said means for determining said value of said customized indexed call option from said determined optimal choice boundary and a second sample of index paths and a second set of predetermined parameters comprises a specially programmed general purpose computer.